

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE



In re Application of

Yuichi MATSUDA

Application/Control No. 09/878,424, Filed: 06/12/2001

for: FIRE-RETARDING THERMOPLASTIC RESIN COMPOSITION

Honorable Commissioner of Patents and Trademarks

United States Patent and Trademark Office

Washington, D. C. 20231

Sir:

DECLARATION UNDER 37 CFR 1.132

I, Yuichi MATSUDA, declare and state that:

1. In March, 1994, I was graduated from Graduate School of Osaka Municipal University, with special study of high-polymer chemistry.

I was employed by Ube Industries, Ltd. in April, 1994. Since then, I worked for the company in the field especially relating to Polymer Material. In May 1996, I was temporarily transferred to Toyota Gosei K.K., Interior Furnishing Technology Department, where I was engaged in development research for non-halogen fire-retardant polypropylene resin. In October 2001, I was transferred to Mitsui Chemicals, Inc. Since then, I have been engaged in development research for non-halogen fire-retardant polypropylene resin.

2. Concerning the above-identified application, I

carried out the following experiment.

Experiment

Example 11 and Comparative Examples 7 to 13

Procedures of Example 10 were followed except that the constituent resin composition was changed as given in Table 3. The results are recited in Table 3.

Table 3 Resin Composition (in wt. part) and Material Properties of Test Specimen

	Exam- ple 11	Comparative Example						
		7	8	9	10	11	12	13
J105 J705	*1) *2)	82 -	80 -	80 -	73 -	80 -	82 -	82 85
Ammonium polyphosphate Melamine pyrophosphate	*3) *4)	9 -	20 -	- -	- 18	20 -	9 9	- 10
Pentaerythritol P. e. dipentaerythritol	*5) *6)	9 -	- -	- -	9 -	- -	- -	5 -
Hydrocalcite Magnesium hydroxide Aluminum hydroxide	*7) *8) *9)	- 0.5 -	- - -	- 20 -	- - 10	- 20 -	- 10 0.5	- - 40
Melamine	*10)	1	20	20	-	-	1	10
Titanium tetrabutoxide	*11)	0.5	-	-	-	-	-	-
Phenolic antioxidant Phosphoric antioxidant Calcium stearate	*12) *13)	0.1 0.2 0.1	0.1 0.2 0.1	0.1 0.2 0.1	0.1 0.2 0.1	0.1 0.2 0.1	0.1 0.2 0.1	0.1 0.2 0.1
Flame-retarding ability Thermal discoloration 120 °C (%) 150 °C (%)	*14) *15)	V-0 3	offgr. 15	offgr. 2	offgr. 0.3 0.5	offgr. 3	offgr. 2 5	offgr. 3 0.3 0.5
Water-proof ability (I) Water-proof ability (II) Mechanical properties	*16) *17) *18)	○ ○ ○	○ × ×	○ ○ ×	○ × ×	○ × ×	○ × ×	○ × ×

Notes in Table 3:

- *1) : The same as *1) of Table 1.
- *2) : The same as *2) of Table 1.
- *3) : The same as *3) of Table 1.
- *4) : The same as *4) of Table 1.
- *5) : See *6) of Table 1.
- *6) : See *7) of Table 1.
- *7) : See *8) of Table 1.
- *8) : See *9) of Table 1.
- *9) : A commercial product of Wako Pure Chemical Industries. Ltd.
- *10) : A commercial product of Tokyo Kasei Kogyo Co., Ltd.
- *11) : A commercial product of Wako Pure Chemical Industries. Ltd.
- *12) : See *10) of Table 1.
- *13) : See *11) of Table 1.
- *14) : See *12) of Table 1.
- *15) : See *13) of Table 1.
- *16) : See *14) of Table 1.
- *17) : See *15) of Table 1.
- *18) : See *16) of Table 1.

I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the above-referenced application or any patent issuing thereon.

Date: 9Yuichi MATSUDA

7月12日 署名

7月20日 署名